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(71) Applicant (for all designated States except US): **ALBERT EINSTEIN COLLEGE OF MEDICINE OF YESHIVA UNIVERSITY** [US/US]; 1300 Morris Park Avenue, Bronx, NY 10461 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **BLANCHARD, John, S.** [US/US]; 657 Ely Avenue, Pelham, NY 10803 (US).

(74) Agents: **ARNOLD, Craig, J.** et al.; Amster, Rothstein & Ebenstein LLP, 90 Park Avenue, New York, NY 10016 (US).

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(54) Title: ASSAY FOR ACETYLTRANSFERASES AND ACETYLTRANSFERASE SUBSTRATES

(57) Abstract: Methods of identifying an acetyltransferase substrate in a sample are provided. Also provided are methods of localizing acetylation of an acetyltransferase substrate in a cell. Additionally, methods of labeling a protein substrate of an acetyltransferase are provided, as are methods of assaying an acetyltransferase in a sample. Methods of quantifying acetyltransferase activity in a sample are further provided. Compositions provided include halo-acetyl-pantetheine, halo-acetyl-pantetheine with a label, and halo-acetyl-CoA with a label on the adenine of the CoA.

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